

Work Order ID 94294

December-05-12 2:13:48 PM

94294

Page 2

Item ID: D350-591-133

Accept

N9000040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Aft Maintenance Step

Start Date: 12/05/12 Start Qty: 12.00

12

Cust Item ID:

Required Date: 12/12/12 Req'd Qty: 12.00

12

Customer:


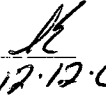

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC6- Inspect dimensions to drawing Memo	0.00 0.00				<u>12</u>	<u>12-12-06</u>		
130 *130* Large Fab Large Fab	Large Fab Memo 1-Deburr and Bevel ends for welding 2-Weld (1) End Cap and (2) Lugs using Jig DT8440 as per Dwg D2946 A/RAluminum Rod <u>122 352</u> 3-Grind End Cap welds flush	0.00 0.00				<u>12</u>	<u>12-12-08</u>	<u>12-12-08</u>	
140 *140* QC Quality Control	QC9- Inspect visual per QSI004- Fusion Welds Memo	0.00 0.00				<u>12</u>	<u>12-12-10</u>		

Work Order ID 94294

December-05-12 2:13:48 PM

94294

Page 3

Item ID: D350-591-133

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Aft Maintenance Step

Start Date: 12/05/12 Start Qty: 12.00

12

Cust Item ID:

Required Date: 12/12/12 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

150

QC5- Inspect part completeness to step on W/O

0.00

150

QC

Memo

0.00

Quality Control

1212-12-10DAS
09
8-83

160

Chemical Conversion Coat per QSI005 4.1

0.00

160

HandFinish

Memo

0.00

Hand Finishing

12φ12-12-10

170

QC3- Inspect Part Finish

0.00

170

QC

Memo

0.00

Quality Control

12φDAS
23
8-8312-12-11

December-05-12 2:13:48 PM

Page 4

Stop ***NR2***

[illegible]

Work Order ID 94294

December-05-12 2:13:48 PM

94294

Page 5

Item ID: D350-591-133 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Aft Maintenance Step
 Start Date: 12/05/12 Start Qty: 12.00 ***12*** Cust Item ID:
 Required Date: 12/12/12 Req'd Qty: 12.00 ***12*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 *210* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				12x <input checked="" type="checkbox"/>			MA 12/12/11
220 *220* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum Memo START TIME: 1:30 OVEN TEMPERATURE: 320 F FINISH TIME: 2:00	0.00 0.00				12x <input checked="" type="checkbox"/>			MA 12/12/11
230 *230* HandFinish Hand Finishing	Wing Walk as per dwg QSI005 4.4 Batch <u>11123350</u> Memo	0.00 0.00				12x <input checked="" type="checkbox"/>			MA 12/12/11

W123383

December-05-12 2:13:48 PM

Page 6

Reference:

Stop *NR2*

240 QC3- Inspect Part Finish

Memo

QC

Quality Control

250 Pick Kit

Memo

Packaging

Packaging

260 QC4- 100% Inspect kits for completeness

Memo

QC

Quality Control

Work Order ID 94294

94294

Page 7

December-05-12 2:13:48 PM

Item ID: D350-591-133

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Aft Maintenance Step

Start Date: 12/05/12 Start Qty: 12.00 *12*

Cust Item ID:

Required Date: 12/12/12 Req'd Qty: 12.00 *12*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
270	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD350-591-133								
	Location: <u>F6059</u>								
	PPP Rev: _____								
280									
280	QC21- Final Inspection - Work Order Release	0.00							
QC	Memo	0.00							
Quality Control									

120 2 12/12/12 DAS 20 8-89

MC5 12-12-12

W12.12.12

Picklist Print

December-05-12 2:13:47 PM

Page 1

Work Order ID: 94294

Parent Item: D350-591-133

Start Date: 12/05/12

Required Date: 12/12/12

Parent Item Name: Aft Maintenance Step

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP Rev:B05.10.14Modified step 10KJ/EC
IPP Rev:B06.07.19D2946 @ rev.b EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN4-11A Bolt		Purchased	No			250	Each	252.0000	4	48	✓	JB	5

Location	Loc Qty	Loc Code
FG	20	
120731	20	
ST356	232	
120731	16	
122808	66	122808
123900	150	

AN4-11A Bolt		Purchased	No			250	Each	354.0000	8	96	✓	JB 12/12/12	5
----------------------------	--	-----------	----	--	--	-----	------	----------	---	----	---	-------------	---

Location	Loc Qty	Loc Code
FG	5	
122141	5	
ST357	349	
115374	1	
120187	13	
121068	17	
121708	4	
122141	2	
122800	12	
123352	150	123352
123900	150	

Picklist Print

December-05-12 2:13:47 PM

Page 2

Work Order ID: 94294

Parent Item: D350-591-133

Parent Item Name: Aft Maintenance Step

Start Date: 12/05/12

Required Date: 12/12/12

Start Qty: 12.00

Required Qty: 12.00

~~AN4-16A~~
Bolt

Purchased No

250 Each 151.0000

8 96 ✓ JB

Location

Loc Qty

Loc Code

FG 5
121541 5
ST357 146
120498 8
122814 31
123352 107

~~AN4-7A~~
Bolt

Purchased No

250 Each 193.0000

2 24 ✓ JB

Location

Loc Qty

Loc Code

ST355 193
120770 2
122141 91
123352 100

~~AN4-9003D416~~
Washer

NAS1149D0463J

Purchased No

250 Each 29.0000

14 168 ✓ JB

Location

Loc Qty

Loc Code

ST351 29
116289 8
119097 21

~~D2230-1~~
Lug

Manufactured No

250 Each 210.0000

4 48 ✓ JB

Location

Loc Qty

Loc Code

FG 4
84136 4
ST469 206
89415 25
89783 21
90575 120
92209 40

December-05-12 2:13:47 PM

Shop Packet Print

Page 2

Picklist Print

December-05-12 2:13:47 PM

Page 3

Work Order ID: 94294

Parent Item: D350-591-133

Start Date: 12/05/12

Required Date: 12/12/12

Parent Item Name: Aft Maintenance Step

Start Qty: 12.00

Required Qty: 12.00

D2230-3

Lug

Manufactured

No

250

Each

330.0000

4

48

✓ JB



Sm 12X

Location

Loc Qty

Loc Code

FG

4

89045

4

Return2012

4

89082

4

89082 4P

ST469

322

89782

19

89950

200

89950 44P

90514

1

92287

102

D2622-120C

Step Extrusion

Manufactured

No

110

Each

130.1300

0.52

6.24

Ac 12-12-06

Location

Loc Qty

Loc Code

WA003

130.13

46910

2

64409

6

66970

7.7

68293

0.25

72131

0.42

75781

2

77612

7.36

81507

1.88

83894

12.38

88513

7.14

89750

83

16.247

D2732

Rubber Extrusion

cut (8) at 3.00"

Manufactured

No

250

f

141.6162

2

24

JB 12/12/12



Sm 10

Location

Loc Qty

Loc Code

ST410

141.6162052

70987

0.3

83560

141.316205

83560

December-05-12 2:13:48 PM

Shop Packet Print

Page 3

Picklist Print

December-05-12 2:13:48 PM

Page 4

Work Order ID: 94294

Parent Item: D350-591-133

Start Date: 12/05/12

Required Date: 12/12/12

Parent Item Name: Aft Maintenance Step

Start Qty: 12.00

Required Qty: 12.00

~~D2834~~

Manufactured No

130 Each 147.0000 2 24

Step End Plate

Location

Loc Qty

Loc Code

WA003

147

80682

6

84563

10

88714

26

91761

105

24

12.12.06

~~D2856-400~~

Manufactured No

250 f 302.8939 1.26 15.12

Abrasion Strip

(2X) 4.00" X 7.20" per dwg

Location

Loc Qty

Loc Code

ST415

302.8939

63735

0.6696

68076

0.3149

71164

8.46

81875

6.398

86905

0.9569

89352

70.0945

90764

216

89352

JB



SmP 12

~~D2943~~

Manufactured No

130 Each 36.0000 2 24

Step Mounting Plate

Location

Loc Qty

Loc Code

WA003

36

73427

4

89394

32

24

12.12.06

~~D2945~~

Manufactured No

250 Each 19.0000 1 12

Step Mounting Plate

Location

Loc Qty

Loc Code

ST022

19

91562

19

91562

JB

12/12/12



SmP 12

December-05-12 2:13:48 PM

Shop Packet Print

Page 4

DART

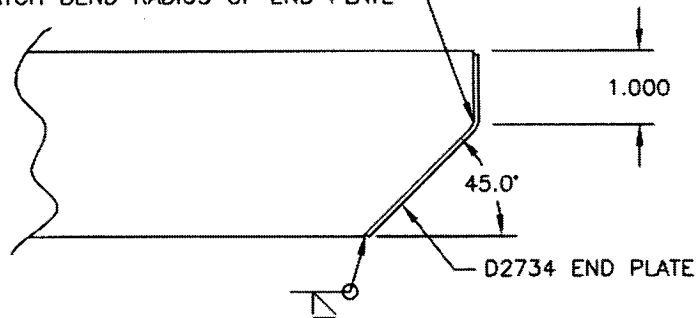
D2946 STEP ASSEMBLY PARTS LIST

Part No.	Description	QTY
D2946	Step Assembly	X
D2622-63	STEP EXTRUSION*	1
D2734	END PLATE	2
D2944	STEP MOUNTING PLATE	2

*cut per drawing

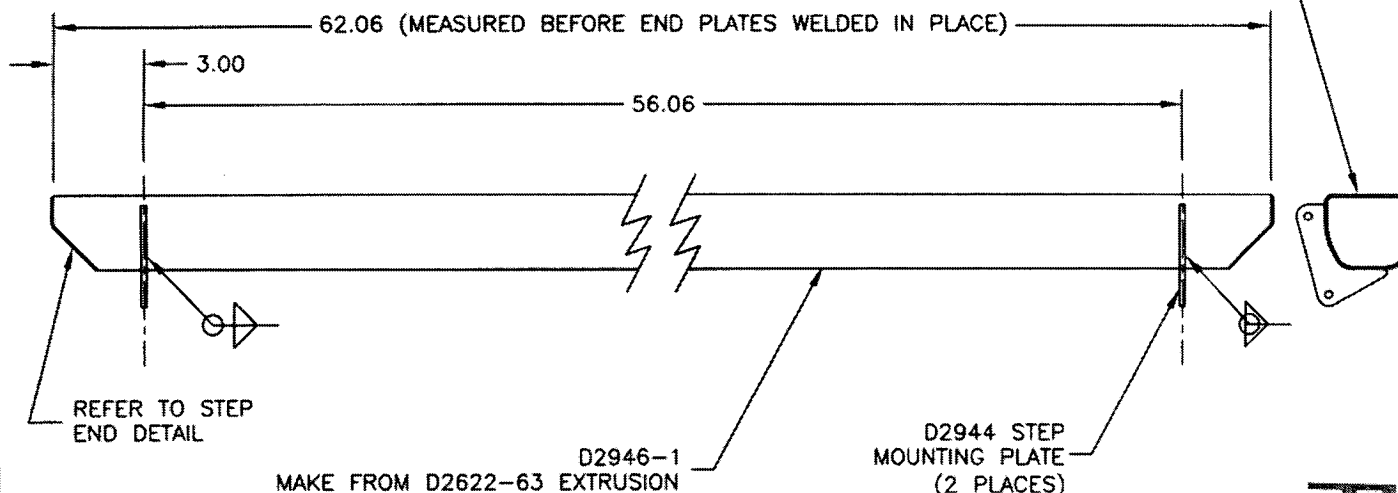
NOTE: ALL WELDS SHALL BE
100% VISUALLY
INSPECTED BY A
QUALIFIED INSPECTOR
PER DART QSI 004

ROUND CORNER OF EXTRUSION TO
MATCH BEND RADIUS OF END PLATE



TYPICAL STEP END DETAIL
NOT TO SCALE

APPLY BLACK ANTI-SKID
ON TOP SURFACE TO
BOTTOM OF TOP RADIUS



D2946-041 STEP ASSEMBLY

D2946 STEP ASSEMBLY

- 1) MAKE FROM D2622 STEP EXTRUSION
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ENTIRE ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

DESIGN	CP	DRAWN BY	PH	DART AEROSPACE LTD
CHECKED	<i>[Signature]</i>	APPROVED	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
DATE	05.11.14	TITLE	D2946	REV. B
			STEP ASSEMBLY	SHEET 1 OF 1
				SCALE 1:6
A	99.12.13	NEW ISSUE		
B	05.11.14	UPDATE FINISHING NOTE		

RELEASED
05.11.28

W/094294

5. PARTS LIST

Qty -111A	Qty -113	Qty -115	Qty -117A	Qty -119	Qty -133	Part Number	Description
X						D350-591-111A	<i>Heli-Access-Step</i> ™, Long Step – High Skid
	X					D350-591-113	<i>Heli-Access-Step</i> ™, Short Step – High Skid
		X				D350-591-115	<i>Heli-Access-Step</i> ™, Short Step – Low Skid
			X			D350-591-117A	<i>Heli-Access-Step</i> ™, Pre-Flight Step
				X		D350-591-119	<i>Heli-Access-Step</i> ™, Long Step – Low Skid
					X	D350-591-133	<i>Heli-Access-Step</i> ™, Aft Maintenance Step
	1					D2310	STEP ASSEMBLY (HIGH-SHORT)
1						D2311	STEP ASSEMBLY (HIGH-LONG)
		1				D2354	STEP ASSEMBLY (LOW-SHORT)
				1		D2355	STEP ASSEMBLY (LOW-LONG)
					1	D2946-041	STEP ASSEMBLY (MAINTENANCE)
4	2	2	2	2		D2171	CLAMP
4	2	2	2	2		D2182B035	CUSHION
					4	D2230-1	MOUNTING LUG
					4	D2230-3	MOUNTING LUG
8	4	4	4	4		D2274	RADIUS BLOCK
			1			D2362-041	SUPPORT BRACKET
2	1			1		D2362-3	SUPPORT BRACKET
		1				D2362-5	SUPPORT BRACKET
2	1	1	1	1	2	D2856-400-720	ABRASION STRIP
					1	D2945	MOUNTING PLATE
2	2	2		2		AN3-37A	BOLT
					2	AN4-7A	BOLT
					4	AN4-11A	BOLT
					8	AN4-14A	BOLT
		4				AN4-16A	BOLT
8	4			4		AN4-20A	BOLT
1	1	1	4	1		AN4-22A	BOLT
4	4	4		4		AN960JD10	WASHER
10	6	2	4	6	14	AN960JD416	WASHER
		4				AN960JD416L	WASHER
2	2	2		2		MS21042L3	NUT
9	5	5	4	5	14	MS21042L4	NUT

Qty -121	Qty -122	Qty -123	Qty -124	Part Number	Description
X				D350-591-121	<i>Heli-Access-Step</i> ™, Short Step – High Skid, LH
	X			D350-591-122	<i>Heli-Access-Step</i> ™, Short Step – High Skid, RH
		X		D350-591-123	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, LH
			X	D350-591-124	<i>Heli-Access-Step</i> ™, Short Step – Low Skid, RH
1				D2351-041	STEP ASSEMBLY (HIGH-SHORT, LH)
	1			D2351-042	STEP ASSEMBLY (HIGH-SHORT, RH)
		1		D2356-041	STEP ASSEMBLY (LOW-SHORT, LH)
			1	D2356-042	STEP ASSEMBLY (LOW-SHORT, RH)
1	1	1	1	D2230-1	MOUNTING LUG
1	1	1	1	D2230-3	MOUNTING LUG
1	1	1	1	D2856-400-720	ABRASION STRIP
2	2	2	2	AN3-37A	BOLT
3	3	3	3	AN4-13A	BOLT
4	4	4	4	AN960JD10	WASHER
6	6	6	6	AN960JD416	WASHER
2	2	2	2	MS21042L3	NUT
3	3	3	3	MS21042L4	NUT

• COPYRIGHT © 1993 BY DART AEROSPACE LTD •
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

Revision: G
Date: 08.10.06

REFERENCE ONLY

SMPS

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS D350-591 REV. G OR EARLIER
AND
INSTRUCTIONS OF CONTINUED AIRWORTHINESS ICA-D350-591 REV. 2 OR EARLIER

REF CANADIAN STC: SH92-6

REF FAA STC: SH967NE

For D350-591-121/-122/-123/-124/-133 steps, customers have the option of installing D2732-030 cushions under the D2230-1/-3 clamps to accommodate varying crosstube diameters and to improve fit. It is also acceptable to use longer or shorter AN4 bolts, and/or extra AN960JD416 washers under the nut to ensure 1.5 to 4 threads in safety. See Figure 1 on sheet 2 of this service instruction for reference.

For D350-591-121/-122 steps at CHG 005, D350-591-123/-124 steps at CHG 004, and D350-591-133 steps at CHG 003, the parts list of D350-591 Rev. G and ICA-D350-591 Rev. 2 is amended as follows:

ADD:

Qty -121	Qty -122	Qty -123	Qty -124	Qty -133	Part Number	Description
X					D350-591-121	Heli-Access-Step ™, Short Step – High Skid, LH
	X				D350-591-122	Heli-Access-Step ™, Short Step – High Skid, RH
		X			D350-591-123	Heli-Access-Step ™, Short Step – Low Skid, LH
			X		D350-591-124	Heli-Access-Step ™, Short Step – Low Skid, RH
				X	D350-591-133	Heli-Access-Step ™, Aft Maintenance Step
2	2	2	2	8	D2732-030	CUSHION
2	2	2	2	8	AN4-16A	BOLT

The DSI-9459-011 kit is available for customers with earlier model D350-591-121/-122/-123/-124 steps. Longer AN4 bolts are provided to fasten the clamps. The DSI-9459-013 kit is available for customers with earlier model D350-591-133 steps.

Qty -011	Qty -013	Part Number	Description
X		DSI-9459-011	Rubber Cushion Kit (for -121/-122/-123/-124 steps)
	X	DSI-9459-013	Rubber Cushion Kit (for -133 steps)
2	8	D2732-030	CUSHION
2	8	AN4-16A	BOLT

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01







APPROVED

BY: 
D. SHEPHERD (DE # 02)

DATE: 09.06.24

CERT. NO.: SH92-6

ISSUE NO.: 11

B	AN4-16A WAS -17A FOR -013/-133 KIT	CP	09.06.24
A	NEW ISSUE	CP	09.04.17
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		DSI 9459	SHEET 1 OF 2
APPROVED		TITLE	SCALE
DE APPR.		OPTIONAL CLAMP MODIFICATIONS	NTS
DATE	09.06.24	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	